

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/IB2005/003269

Box No. I Basis of the opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - a sequence listing
 - table(s) related to the sequence listing
 - b. format of material:
 - in written format
 - in computer readable form
 - c. time of filing/furnishing:
 - contained in the international application as filed.
 - filed together with the international application in computer readable form.
 - furnished subsequently to this Authority for the purposes of search.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or
industrial applicability; citations and explanations supporting such statement**

1. Statement

| | | |
|-------------------------------|-------------|------|
| Novelty (N) | Yes: Claims | |
| | No: Claims | 1-25 |
| Inventive step (IS) | Yes: Claims | |
| | No: Claims | 1-25 |
| Industrial applicability (IA) | Yes: Claims | 1-25 |
| | No: Claims | |

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

V.1 Prior Art

Reference is made to:

D1: US 2002/0063002 A
D2: US-B-6 290 012
D3: US 2002/0179351 A

V.2 Novelty and Inventive Step

1. The application does not meet the requirements of the PCT because the subject-matter of claim 1 is not new (Article 33(2) PCT).

D1 discloses an

engine start control device for a hybrid vehicle equipped with an electric motor (531) and an engine (511) with an induction system, comprising:
a hybrid controller (100, controlling ECM 220 and TMU 230) that performs an engine start determination to determine whether the engine (511) should be started while the electric motor (531) is running;
an acceleration position sensor that detects an acceleration demand during the engine start determination (middle of paragraph 75); and
a start/power generation motor (532) that starts the engine (511), wherein the start/power generation motor controls a pressure in the induction system based on acceleration demand.

Accordingly, the subject-matter of claim 1 lacks novelty.

2. In fact, D1 discloses the same design of the hybrid vehicle as the application, compare Figure 1A of the application to Figure 3 of D1. The one-clutch (521) of D1 is optional,

paragraph 49. Further, the examiner considers that this one-way clutch does allow the generator (532) to start the engine (511). This opinion is confirmed by the engine start description of D1 in paragraph 55. Starting is carried out using battery (410), which is shown as being connected to generator (532) in Figure 3.

D1 further discloses the ECM (220) controlling airflow, fuel flow and ignition of the engine, the middle of paragraph 48 bridging pages 4 and 5. This is done, among other things, to coordinate engine start/stops, paragraph 65. Whether the engine (511) is started depends, also among other things, from driver input "During high driver acceleration demands, however, ignition and the injection of fuel is started ...", see D1, paragraph 72. The problem of shocks during engine start has been recognized in D1, paragraph 75. The same paragraph discloses monitoring battery state of charge as well as accelerator position. Airflow to the engine - which corresponds to pressure or throttle position - is clearly mentioned in paragraph 80.

3. For the same reasons, the subject-matter of the independent claims 11 and 21 also lacks novelty (Article 33(2) PCT). As regards the dependent claims, their subject-matter also lacks novelty over D1. Battery state of charge as well as an adaption of the engine starting procedure depending on the acceleration amount desired by the driver are amply discussed in D1.
4. The basic concept of controlling pressure in the induction system when restarting the engine is also disclosed in D2, column 1, lines 38 to 49, and D3, paragraphs 21 to 24.

V.3 Industrial Applicability

The subject-matter of claims 1 to 25 seems to fulfil the requirement of Article 33(4) PCT since it can be used at least in the vehicle industry.

Re Item VII

1. Claim 1 includes all features of claim 21, but is not drafted as dependent claim (Rule 6.4 PCT). The features of the claims have not been provided with reference signs in parenthesis (Rule 6.2 b) PCT.

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AUTHORITY (SEPARATE SHEET)**

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2. The independent claims are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art being placed in the preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).
3. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in D1 is not mentioned in the description, nor is this document identified therein.

From the INTERNATIONAL BUREAU

PCT**NOTIFICATION OF THE RECORDING
OF A CHANGE**(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

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| Date of mailing (day/month/year) 30 November 2006 (30.11.2006) |
| Applicant's or agent's file reference 1085-003WO01 |
| International application No. PCT/IB2005/003269 |

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| To: | BASILE, Andrew, R. Young & Basile 3001 West Big Beaver Road Suite 624 Troy, MI 48084 ETATS-UNIS D'AMERIQUE |
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|--|--|--|---|
| 1. The following indications appeared on record concerning: | | | |
| <input type="checkbox"/> the applicant | <input type="checkbox"/> the inventor | <input checked="" type="checkbox"/> the agent | <input type="checkbox"/> the common representative |
| Name and Address SIEFFERT, Kent, J. Shumaker & Sieffert, P.A. 8425 Seasons Parkway Suite 105 St. Paul, MN 55125 United States of America | | State of Nationality State of Residence | |
| | | Telephone No. +1 651 735 1100 | |
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| | | Teleprinter No. | |
| 2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning: | | | |
| <input checked="" type="checkbox"/> the person | <input type="checkbox"/> the name | <input type="checkbox"/> the address | <input type="checkbox"/> the nationality <input type="checkbox"/> the residence |
| Name and Address BASILE, Andrew, R. Young & Basile 3001 West Big Beaver Road Suite 624 Troy, MI 48084 United States of America | | State of Nationality State of Residence | |
| | | Telephone No. | |
| | | Facsimile No. | |
| | | Teleprinter No. | |
| 3. Further observations, if necessary: New agent has been appointed | | | |
| 4. A copy of this notification has been sent to: | | | |
| <input type="checkbox"/> the receiving Office | <input checked="" type="checkbox"/> the designated Offices concerned | | |
| <input type="checkbox"/> the International Searching Authority | <input type="checkbox"/> the elected Offices concerned | | |
| <input type="checkbox"/> the International Preliminary Examining Authority | <input type="checkbox"/> other: | | |
| The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland | | Authorized officer Martinez Sandrine | |
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